What is claimed is:

1. A hydrogen storage container comprising:

a) an enclosed canister having a wall and at least one outlet opening for charging and discharging hydrogen gas;

b) a metal hydride material contained within said canister, said material being capable of absorbing and desorbing hydrogen gas; and

c) a gauge for measuring the capacity of hydrogen that remains absorbed with said metal hydride material and is available for discharge through said at least one outlet opening.

2. The hydrogen storage container according to Claim 1 wherein said gauge further comprises a pressure gauge in fluid communication with the enclosed canister, said pressure gauge having a plurality of scales for reading the amount of hydrogen stored within said hydride material, each said scale being indicative of the amount of stored hydrogen at different temperatures.

3. The hydrogen storage container according to Claim 2 wherein said pressure gauge further comprises a temperature sensitive material portion that changes color depending on the ambient temperature, whereby the appropriate scale is indicated thereby providing the correct reading of the temperature dependent hydrogen capacity.

4. The hydrogen storage container according to Claim 3 wherein said pressure gauge further comprises an indicator, for providing an indicating characteristic to enable observers to choose the appropriate one of said plural scales which corresponds to the ambient temperature of said hydride material in said canister.

5. The hydrogen storage container according to Claim 1 wherein said canister further comprises a rigid chamber disposed adjacent said canister wall, having an inner portion in fluid

communication with the space enclosed by said canister wall, and an aperture visible outside of said canister wall, and a fuel indicator disposed within said aperture, said fuel indicator being capable of indicating the capacity of hydrogen gas stored within the metal hydride material disposed in said canister.

6. The hydrogen storage container according to Claim 5 wherein said chamber includes metal hydride material, closely packed within the space enclosed by said chamber, said metal hydride material being in longitudinal communication with a pressure sensitive element disposed adjacent said aperture, whereby volumetric changes in said hydride material within said chamber cause corresponding changes in the pressure exerted by said hydride material as a result of physical expansion caused by absorption of hydrogen by said hydride material.

7. The hydrogen storage container according to Claim 6 wherein said fuel indicator comprises a pressure sensitive member and expansion or contraction of said hydride material in said chamber causes pressure differential on said fuel indicator, thereby indicating the amount of pressure caused by volumetric expansion of said hydride material in said chamber.

8. The hydrogen storage container according to Claim 7 wherein said fuel indicator further comprises an enclosing pressure sensitive plastic capable of changing color as an indication of the hydrogen capacity of said hydride material in said container.

9. The hydrogen storage container according to Claim 7 wherein said fuel indicator further comprises a piezoelectric member which produces an electrical signal indicative of the pressure exerted by said metal hydride material in said chamber.

10. The hydrogen storage container according to Claim 9 wherein said metal hydride material in said chamber is identical to the hydride material in the space enclosed by the canister wall.

11. The hydrogen storage container according to Claim 6 wherein said metal hydride material in said chamber is identical to the hydride material in the space enclosed by the canister wall.

12. The hydrogen storage container according to Claim 9 wherein said metal hydride material in said chamber is identical to the hydride material in the space enclosed by the canister wall.

13. The hydrogen storage container according to Claim 9 further comprising a temperature sensor disposed within said container generating an electrical signal indicative of a temperature valve, said piezoelectric and temperature sensor signals being received by a central processor, said central processor being capable of calculating the value of hydrogen capacity based on a predetermined algorithm.

14. The hydrogen storage container according to Claim 13 further comprising a digital display for receiving a value of hydrogen capacity calculated by said central processor and for displaying the value on said display in digital format.

15. The hydrogen storage container according to Claim 1 wherein said canister further comprises a chamber disposed within said canister wall, said chamber being packed with metal hydride material and in fluid communication with the space enclosed by said canister wall, lead lines attached to terminals located at opposing sides of said chamber, said lead lines being accessible external to said canister wall and a resistance measuring device attachable to said lead lines for measuring the electrical resistance level within said hydride material disposed within said chamber, said resistance level being indicative of the capacity of hydrogen gas stored within the metal hydride material disposed in said canister.

16. The hydrogen storage container according to Claim 15 wherein said chamber further comprises rigid walls of an insulating material permeable to hydrogen gas.

17. The hydrogen storage container according to Claim 16 wherein material permeable to hydrogen gas further comprises a polymer.

18. The hydrogen storage container according to Claim 16 wherein material permeable to hydrogen gas further comprises Teflon®.

19. A hydrogen storage container comprising:

a) an enclosed canister having a wall and at least one outlet opening for charging and discharging hydrogen gas;

b) a metal hydride material contained within said canister, said material being capable of absorbing and desorbing hydrogen gas, and including a porous matrix disposed within said metal hydride material for providing efficient distribution of hydrogen gas to said metal hydride material; and

c) a gauge for measuring the capacity of hydrogen that remains absorbed with said metal hydride material and is available for discharge through said at least one outlet opening.